UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,358	12/03/2003	Tianyi Liao	LP 4820 US NA	6394

43693 7590 12/15/2009

INVISTA NORTH AMERICA S.A.R.L.
THREE LITTLE FALLS CENTRE/1052
2801 CENTERVILLE ROAD
WILMINGTON, DE 19808

EXAMINER	
PIZIALI, ANDREW T	
ART UNIT	PAPER NUMBER
1794	

NOTIFICATION DATE	DELIVERY MODE
12/15/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Kathy.L.Crew@invista.com
iprc@invista.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte TIANYI LIAO

Appeal 2009-006288
Application 10/728,358
Technology Center 1700

Decided: December 11, 2009

Before EDWARD C. KIMLIN, CHARLES F. WARREN, and TERRY J. OWENS, *Administrative Patent Judges*.

KIMLIN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 9-20. Claims 9 and 15 are illustrative:

> 9. A composite yarn, comprising:
>
> at least one elastomeric fiber forming a strand with a total draft in a range from 1.2X to 6.2X of an original spun length of the strand;

at least one hard yarn selected from the group consisting of: synthetic fibers, natural fibers and a blend of synthetic and natural fibers, wherein said hard yarn is aligned adjacent and substantially parallel to said strand to make an aligned yarn; and

a dried or cured size material forming an adhesive that adheres the strand and hard yarn of the aligned yarn together.

15. An elastic woven fabric, comprising upon weaving and before final fabric finishing:

composite yarns of claim 9 and hard yarns in the warp; and hard yarns in the weft;

wherein the ratio of said composite yarns to said hard yarns in the warp ranges from 1:1 to 1:4.

The Examiner relies upon the following references in the rejection of the appealed claims:

Hayes	3,719,664	Mar. 6, 1973
Miller	3,867,242	Feb. 18, 1975
Strachan	3,940,917	Mar. 2, 1976
Brodowski	5,896,634	Apr. 27, 1999
Nakatomi	4733754	Aug. 26, 1972

Appellant's claimed invention is directed to a composite yarn comprising hard yarn that is aligned adjacent and substantially parallel to a strand of elastomeric fiber. A size material adheres the strand of elastomeric fiber and hard yarn together.

The appealed claims stand rejected under 35 U.S.C. § 103(a) as follows:

(a) claims 9-20 over Strachan in view of Brodowski,

(b) claims 9-10 and 12-20 over Strachan in view of Nakatomi,

(c) claims 9-16 over Strachan in view of Hayes,

(d) claims 13-20 over Strachan in view of Brodowski and Miller,

(e) claims 13-20 over Strachan in view of Nakatomi and Miller, and

(f) claims 13-16 over Strachan in view of Hayes and Miller.

We have thoroughly reviewed each of Appellant's arguments for patentability. However, we are in complete agreement with the Examiner that the claimed subject matter would have been obvious to one of ordinary skill in the art within the meaning of § 103 in view of the applied prior art. Accordingly, we will sustain the Examiner's rejections for essentially those reasons expressed in the Answer, and we add the following primarily for emphasis.

There is no dispute that Strachan, like Appellant, discloses a composite yarn comprising at least one elastomeric fiber and at least one hard yarn adjacent to the elastomeric fiber. The principal argument advanced by Appellant is that "Strachan does not provide yarn having an elastic strand aligned with hard fibers because the yarn prepared by Strachan is entangled" (Br. 5, first full para.). However, Appellant concedes that "[w]hen the yarn of Strachan is in a stretched position such that the hard yarn becomes load bearing, there are portions of the yarn where an elastomeric strand and a hard yarn which [sic] are 'substantially parallel' to each other" (Br. 5, sec. full para.). Since we agree with the Examiner that the appealed claims "do not require that every portion of the hard yarn must be substantially parallel with every portion of the elastomeric strand" (Ans. 13, first sentence), we find no error in the Examiner's finding that Strachan discloses an aligned yard within the scope of the appeal claims, i.e., "a

composite yarn that comprises portions wherein a hard yarn and an elastomeric strand are substantially parallel" (Ans. 13, first para.).

Also, according to the American Heritage Dictionary of the English Language, 4th edition, copyright 2002, the term "yarn" is defined as "1. A continuous strand of twisted threads of natural or synthetic material, such as wool or nylon, used in weaving or knitting." Hence, since the claimed composite yarn is, by definition, comprised of twisted threads, we perceive no distinction in yarns within the scope of the appealed claims and the composite yarns of Strachan wherein both the claimed and prior art yarns do not comprise strands and fibers in a straight line. We agree with the Examiner's rationale that "[c]onsidering that the hard yarn and elastomeric strand of Strachan are aligned in the same overall direction, the hard yarn and elastomeric strand are substantially parallel", as well as aligned, to the extent presently claimed. (Ans. 12, last sentence).

It is also noteworthy that neither independent claims 7 nor 19 requires any alignment between the elastomeric fibers and the hard yarn. We agree with the Examiner that the elastomeric fibers and hard yarn of Strachan are substantially parallel to each other.

As for Appellant's argument that Strachan teaches away from the claimed invention by pointing out that the step of using fibers with a sizing material is unnecessary, Appellant has not refuted the Examiner's finding that "Strachan simply discloses that an especially cohesive size material should not be applied, prior to the entangling process, to allow the bundle to open during the entangling process (col. 6, ll. 52-59)." (Ans. 13, sec. para.). Appellant has pointed to no error in the Examiner's finding that "Strachan discloses that certain finishes may be applied prior to the entangling process

that do not prevent the hard yarns from opening during the entanglement process and that any size material may be applied after the entangling process" (*id.*).

As a final point, we note that Appellant bases no argument upon objective of nonobviousness, such as unexpected results.

In conclusion, based on the foregoing and the reasons well stated by the Examiner, the Examiner's decision rejecting the appealed claims is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

kmm

INVISTA NORTH AMERICA S.A.R.L.
THREE LITTLE FALLS CENTRE/1052
2801 CENTERVILLE ROAD
WILMINGTON, DE 19808